United States Patent [19]

Banerjee et al.

[11] **Patent Number: 4,938,236**

[45] **Date of Patent: Jul. 3, 1990**

[54] **TOBACCO SMOKING ARTICLE**

[75] Inventors: **Chandra K. Banerjee, Pfafftown; Henry T. Ridings, Lewisville, both of N.C.**

[73] Assignee: **R. J. Reynolds Tobacco Company, Winston-Salem, N.C.**

[21] Appl. No.: **408,814**

[22] Filed: **Sep. 18, 1989**

[51] Int. Cl.[5] **A24D 1/00; A24D 1/18**

[52] U.S. Cl. **131/194; 131/271; 131/273; 131/360**

[58] Field of Search 131/194, 270, 271, 273, 131/360, 359

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,104,266	1/1938	McCormick .	
3,258,015	6/1966	Ellis et al. .	
3,683,936	8/1972	O'Neil, Jr. .	
4,079,742	3/1978	Rainer et al. .	
4,149,548	4/1979	Bradshaw .	
4,284,089	8/1981	Ray .	
4,393,884	7/1983	Jacobs .	
4,708,151	11/1987	Shelar .	
4,714,082	12/1987	Banerjee et al. .	
4,756,318	7/1988	Clearman et al. .	
4,774,971	10/1988	Vieten .	
4,793,365	12/1988	Sensabaugh, Jr. et al. .	

FOREIGN PATENT DOCUMENTS

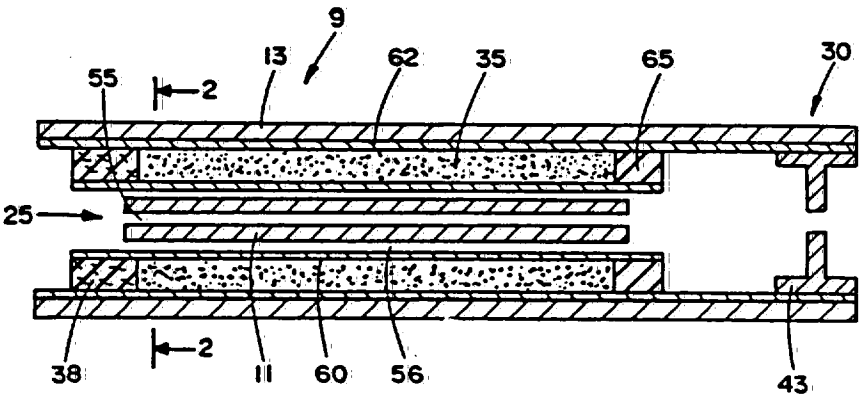
276250	6/1967	Australia .
86/02528	5/1986	World Int. Prop. O. .

Primary Examiner—V. Millin

[57] **ABSTRACT**

A cigarette provides tobacco flavor by heating tobacco, but not burning tobacco or any other material. A heat source which includes granular magnesium, granular iron, and finely divided cellulose generates heat upon contact thereof with an aqueous solution of potassium chloride. The heat source is in a heat exchange relationship with the tobacco. Heat generated by the heat source heats tobacco in a controlled manner. Flavors volatilize from the tobacco and are drawn from the cigarette and into the mouth of the smoker. Typical heat sources heat the tobacco to a temperature within about 70° C. to about 180° C. for 4 to 8 minutes.

47 Claims, 2 Drawing Sheets



2021343289

RECEIVED
PHILIP MORRIS MANAGEMENT CORP.
LAW DEPT.—PATENT SECTION

JUL 10 1990

Source: https://www.industrydocuments.ucsf.edu/docs/tzkl0000